

Ka Band Hardware

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Abstract:

The radios for planetary missions in the near future (2003-2013) will utilize Ka-Band for the downlink frequency to transmit data back from the spacecraft to the DSN stations on Earth. This will allow both greater bandwidth and receiver signal strength for a given set of mass volume and DC power constraints.

Among the challenges in moving from the current X-Band frequency assignments to Ka-Band will be achieving comparable component performance, and also pointing the Ka-Band downlink accurately enough to compensate for the narrower beamwidth. This presentation will discuss the current developments ongoing at JPL to address the challenges.